

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street San Francisco, Ca. 94105

September 9, 1991

IN REPLY A-3-1 REFER TO: AZP 90-1

John W. Somerhalder II El Paso Natural Gas Company P.O. Box 1492 El Paso, TX 79978

Dear Mr. Somerhalder:

This is in response to your application for an Environmental Protection Agency Approval to Construct pursuant to the Prevention of Significant Air Quality Deterioration regulations (40 CFR 52.21) for the proposed upgrade to the El Paso Natural Gas Company Window Rock Compressor Station located 5 miles southwest of the community of Window Rock in Apache County, AZ (west ½ northeast ¼ of section 34, Township 26 North, Range 30 East).

On the basis of the information submitted by El Paso Natural Gas Company, and the review criteria established by the above mentioned regulations, EPA has concluded that the project will not cause, or significantly contribute to, a violation of any National Ambient Air Quality Standards in the Navajo Indian Reservation. It is the intent of EPA to approve the project subject to the enclosed conditions.

A public notice in the local newspaper will announce the proposed project, EPA's proposed action, and the locations where EPA's technical analysis will be available. A copy of the enclosed Ambient Air Quality Impact Report is available for public inspection at the EPA Regional Office in San Francisco.

Comments on this proposed action may be submitted to the EPA San Francisco Regional Office, Attn: Gerardo C. Rios (A-3-1), for a period of thirty (30) days from the start of the public comment period. Unless substantive new information is forthcoming, a final decision on the proposed action granting an Approval to Construct will be granted upon concurrence from the U.S. Fish and Wildlife Service, the U.S. Forest Service, and the National Park Service. Should there be a significant degree of public comment with respect to the proposed action, EPA may hold a public hearing.

The final permit action will be effective immediately upon issuance, unless:

- 1. Review is requested under 40 CFR 124.19.
- No comments requested a change in the draft permit, in which case the permit shall become effective immediately upon issuance.

For questions concerning the technical review of your application please call Gerardo C. Rios of our New Source Section at (415) 744-1263.

Sincerely,

David P. Howekamp

Director

Air and Toxics Division

Enclosure

cc: Louise A. Linkin, NNEPA
Deborah A. Potter, FS
Prabhat Bhargava, ADEQ
Gary Cummins, PFNP
Merrit Nicewander, Region 6
Miguel Flores, NPS
Tonnie Maniero, NPS
Kenneth R. Luckow, FS
Lesley Fitzpatrick, FWS

Ambient Air Quality Impact Report (AZP 90-01)

I. Applicant

El Paso Natural Gas Company P.O. Box 1492 El Paso, TX 79978

II. Project Location

The proposed gas turbine compressor will be located approximately 5 miles southwest of the community of Window Rock in Apache County, AZ (west ½ northeast ¼ of section 34, Township 26 North, Range 30 East). Figure 1 is the close-up of the proposed expansion project for the San Juan Mainline natural gas transmission pipeline (see figure 2) at the Navajo Compressor Station.

The nearest Class I area is the Petrified Forest National Park, which is located approximately 45 miles southwest of the project site.

III. Project Description

El Paso Natural Gas Company (EPNG) proposes to expand the existing San Juan Mainline natural gas transmission pipeline system which extends from northwestern New Mexico to the Arizon-California border at Topock. The natural gas will be transferred to other pipeline systems once it arrives at Topock for use within California. The Window Rock Compressor Station was placed in service in 1958 and consists of 12 reciprocating engines for gas compression with a total of 30,500 hp, 3 auxiliary engines at 680 hp each which drive 3 small (480 kW) power generators. The latest engine was placed in service 1966. EPNG proposes to modify the Navajo compressor station by adding a Solar Centaur H gas turbine (5,501 hp maximum rated capacity) which will be operated at a maximum of 3,992 hp.

Process Systems

The pumping station consists of 12 reciprocating engines capable of delivering 30,500 hp of compression and will include the proposed Solar Centaur H which will deliver a maximum of 3,992 hp of compression. The the three auxilaury engines drive 3 generators which produce 480 kW each or a total of 1,440 kW.

The maximum compression power out of the facility will be 34,611 hp for the transmission of natural gas throughout the San Juan Mainline.

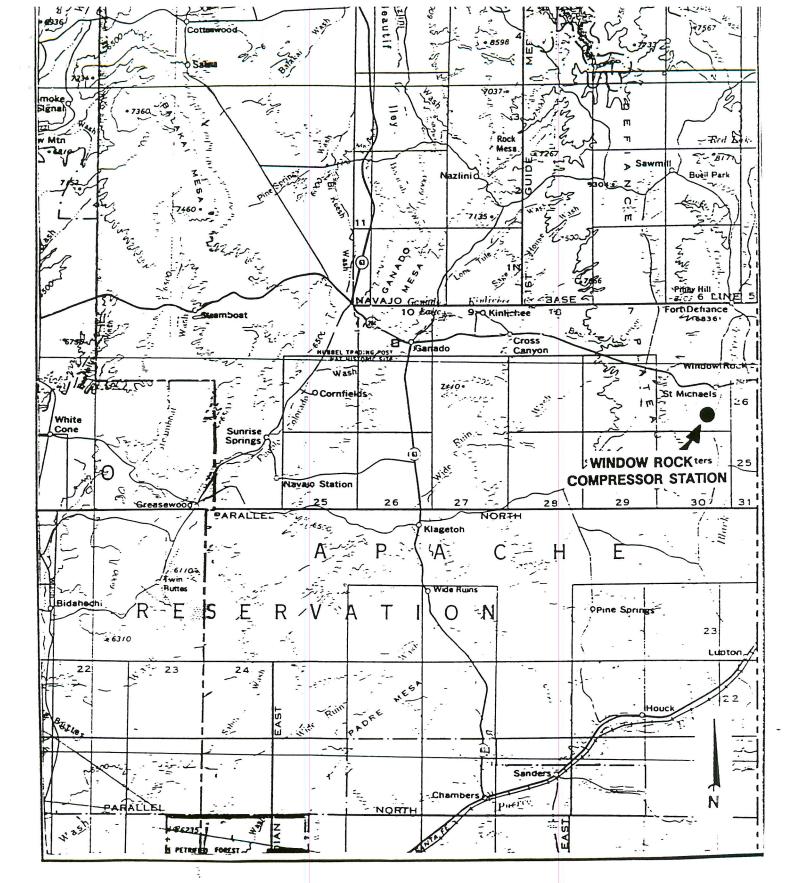


Figure 1

Location of Window Rock Compressor Station

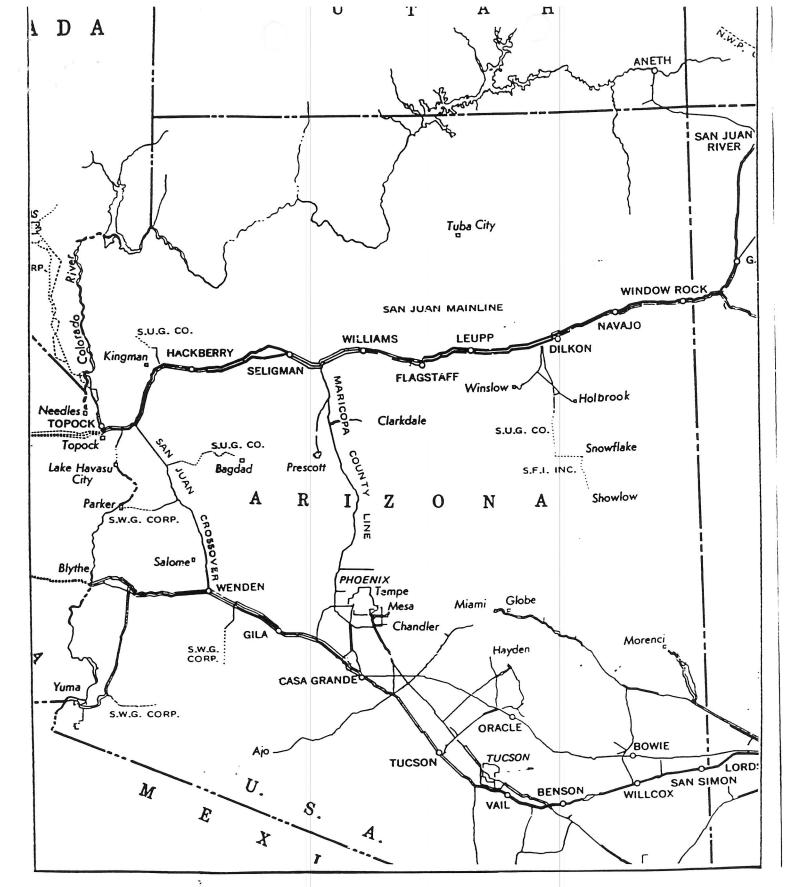


Figure 2
EPNG Pipeline Transmission Facilities

Fuel Supply

The compressor station's only fuel will consist of sweet pipeline quality natural gas from the San Juan Mainline. The sulfur content will be very low, and because the fuel is natural gas, there will be insignificant fuel bound NO_{X} .

V. Emissions from the Project

Presently, the Navajo Compressor Station has the potential to emit 2,976.4 tons/year of NO_X (see Table I). The modification includes the addition of the Solar Centaur H gas turbine compressor which has the potential to emit 54.29 tons/yr of NO_X when burning a maximum of 2933.4 lb/hr of natural gas. Since the Navajo Compressor Station is a major stationary source (over 250 tons/yr) and the modification is over 40 tons/yr of NO_X (54.29 tons/yr), then the modification is a major modification subject to PSD review. The total emissions from the facility will be 3,032 tons/yr of NO_{x} . In 1994, after the installation of the dry low NO_{x} combustor, the Solar Centaur H gas turbine will have the potential to emit 28 tons/yr of NO_X (a 50% reduction in emissions on that unit). The projects estimated emissions are summarized in Table I for ${\rm SO_X}$, ${\rm NO_X}$, CO, VOCs, and ${\rm PM_{10}}$. The emissions are based on 8,760 hours per year of operation using pipeline quality natural gas.

Table I El Paso Natural Gas Company Potential to Emit

Pollutant	Existing	Proposed ¹	Proposed ²	Significant Emission	Total ¹ Emissions
	(Ton/yr)	(Ton/yr)	(Ton/yr)	(Ton/yr)	(Ton/yr)
co^{b}	443.1	3.0	3.0	100	445.1
$no_{\mathbf{x}}^{a}$	3417.6	54.3	26.7	40	3471.9
$so_{\mathbf{x}}^{}}$	0.6	0.1	0.1	40	0.7
PM_{10}^{b}	5.3	0.9	0.9	15	6.2
voc ^b	1378.8	3.5	3.5	40	1382.3

Based on manufacturer guarantee. Based on AP-42. Dry combustion control emissions Using low NO_X combustor

V. <u>Applicability of New Source Review (NSR) and Prevention of Significant Deterioration (PSD).</u>

A. Non-attainment New Source Review (NSR)

The Navajo Indian Reservation does not have any areas classified non-attainment for any criteria pollutant. Therefore, New Source Review does not apply.

B. PSD

The proposed project will be located in Apache County within the Navajo Indian reservation. The area is unclassified for $\mathrm{NO_X}$, $\mathrm{SO_X}$, $\mathrm{PM_{10}}$, $\mathrm{O_3}$, and CO .

The Prevention of Significant Deterioration (PSD) regulations (40 CFR 52.21) define a "major stationary source" as any source type belonging to a list of 28 source categories which emits or has the "potential to emit" 100 tons per year or more of any pollutant regulated under the Clean Air Act, or any other source type which emits or has the potential to emit such pollutants in amounts equal to or greater than 250 tons/year. There is no applicable source category for this source type. However, the Window Rock Compressor Station has the potential to emit more than 250 tons/yr of NO_X; therefore, it a major stationary source of NO_X.

A PSD review applies to all attainment criteria and non-criteria pollutants for which the proposed new source shows significant increases in potential emissions. For this facility, the only significant pollutant is NO_X. The significant emission rates are defined in 40 CFR 52.21(b)(23(i) for any pollutant subject to regulation and are listed in Table I as "Significant Emission Rates. "The "potential to emit" from this proposed project, is above the applicable 40 ton/yr cutoff for NO_X, therefore, the project is a "major modification" and requires PSD review.

PSD regulations require that the following reviews be conducted for each pollutant subject to review:

- Application of Best Available Control Technology (BACT),
- Ambient air quality impacts from the project,
- Air quality and/or visibility impacts on Class I areas, and
- 4. Impacts on soils and vegetation.

Also, the Endangered Species Act requires that no federal action shall take place if a biological assessment of the impacted area is not made, or if the biological assessment of the impacted area shows that the project will degrade or destroy an endangered species or its habitat.

VI. Best Available Control Technology (BACT)

PSD regulations require a determination of BACT for each pollutant subject to PSD review. BACT is defined as "...an emissions limitation (including a visible emissions standard) based on the maximum degree of reduction of each pollutant subject to regulation under the Act...which the Administrator, on a case-by-case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable for such source..."

Nitrogen Oxides

The applicant proposes to control NO $_{\rm X}$ emissions through the use of dry combustion techniques for the first two years. The dry combustion technique that the applicant proposes to use consists of high excess air to lower the combustion temperature and increase the fuel residence time of the fuel resulting in an emission rate of 84.9 ppmvd at 15% O $_{\rm Z}$ (54.29 TPY) at the site. In 1994, when dry low NO $_{\rm X}$ combustors become available, EPNG will install dry low NO $_{\rm X}$ combustors in the Solar Centaur H gas turbine. The retrofit will reduce NO $_{\rm X}$ emissions from the gas turbine by 51%; the reduction translates into an emission rate of 42 ppmvd at 15% O $_{\rm Z}$, ISO conditions (based on vendor guarantee) or 26.6 TPY.

Table II, Ranked Control Alternatives, depicts the available control options for this process. control alternatives were ranked in order of effectiveness for this particular source. As shown, the top control alternative for the compressor station is Selective Catalytic Reduction (SCR) at 26 ppmv (16.9 TPY), and water injection and the low NOx combustor achieve the same amount of control at 42 ppmv (26.6 TPY); therefore, water injection and the low NOx combustor rank lower and SCR. Due to functional differences between gas turbine compressors and gas turbines that produce electricity, SCR does not achieve the amount of control (9 ppm) achievable on gas turbines which produce electricity. Selective Non-catalytic Reaction (SNCR) is technically infeasible for this process due to the high operating temperature.

Although El Paso Natural Gas did not propose SCR as BACT, EPNG did design an SCR system that would function under the gas turbine compressor operating conditions. Because the load varies greatly in a gas turbine compressor, the maximum control of NO_x achievable was estimated to be 70% (26 ppmv at 15% 0°_{2}) for the However, the use of an SCR system proposed turbine. would require extensive onsite supervision, but the operation of a transmission compressor is usually unstaffed. Furthermore, SCR will only achieve a 10 TPY reduction greater than the dry low NO, combustor, but SCR system for this operation will have a ammonia slip at a rate comparable to the NO_x emissions (20-50 ppm). Thus, the NO_x control efficiency of the SCR system is not as effective in reducing air pollution emissions as the dry low ${\rm NO}_{\rm X}$ combustor since the SCR system will increase the emissions of air pollution from another air contaminant.

Water injection, like SCR, would require that the compressor station be staffed. Also, the facility would require abundant amounts of water that would tap into the Navajo Indian Reservation water table. Tapping into the Navajo's water table could greatly reduce the already scarce water availability for the Reservation. Furthermore, the compressor station would require a water treatment plant; water treatment plants use HCl and other caustic materials to regenerate the deionizer beds causing potential environmental hazards and potential air emissions. Water injection achieves less emission reductions than SCR and is less cost effective than SCR; therefore, water injection ranks lower on the chart than SCR. Furthermore, although water injection achieves the same emission reductions as the dry low ${
m NO}_{
m X}$ combustor, water injection is less cost effective than the dry low NOx combustor.

Low NO $_{\rm X}$ combustors, previously available only on larger gas turbines, are a continually developing technology that will reduce NO $_{\rm X}$ emissions. The new combustor will reduce emissions as much as water injection (42ppm) and will not deplete the vicinity of any natural resources. Furthermore, the combustors will not require onsite supervision; thus, the station can remain unstaffed. However, the low NO $_{\rm X}$ combustor will not be available for this size turbine until 1993. Nevertheless, the cost of this control technology would be much lower than either water injection or SCR. Also, the dry low NO $_{\rm X}$ combustor will achieve emission reductions comparable to water injection or, for this operation,

SCR. Additionally, low NO_X combustors will not cause potentially hazardous air pollutants to be emitted. Hence, EPA finds that low NO_X combustors, as proposed by El Paso Natural Gas, are the best available control technology for this source.

<u>Toxics</u>

The North County Prevention of Significant Deterioration (PSD) remand requires that all pollutants, including those not direcly regulated by the Clean Air Act, be considered in making the best available control technology (BACT) determination. The selection of low NO_X combustors has eliminated the possibility of emissions of hazardous air pollutants. Water injection would require a water treatment plant which uses large quantities of HCl, and SCR requires large quantities of ammonia; thus both control technologies have the potential to release additional pollutants. The low NO_X combustors, however, will not require the use of a reagent for the control of NO_X. Therefore, the low NO_X combustor is the control technology with the lowest potetial to emit other pollutants.

Table II
Ranked Control Alternatives

Control NO Technology	Emission Rate (ppmv, 15%0 ₂)	Increase Other Pollutants	Total NO _X (Tons/yr)
SCR with NH ₃ injection	n 26	yes	16.9
Dry Low $\mathtt{NO}_{\mathbf{X}}$	42	no	26.6
Water/Steam Injection	42	yes	26.6
Combustion Control	72	no	54.29

 $^{^{1}}$ Calculated with two years using cumbustion controls and 18 years with Dry Low NO_{X} combustors installed.

VII. Air Quality Impact

PSD regulations require an air quality analysis to determine the impacts of the proposed project on ambient air quality. The analysis must consider whether the proposed project will cause a violation of (1) the applicable PSD increments and (2) the National Ambient Air Quality Standards (NAAQS).

The existing and the proposed gas turbines will be located in a Class II area that is unclassified for any criteria pollutant. The nearest Class I area is the Petrified Forest National Park, which is located approximately 45 miles of the project site. This Class I area was examined for potential visibility impacts (See Section VIII, Additional Impacts); the modeled air quality impacts for NO $_{\rm X}$ were insignificant (less than 1 $\mu {\rm g/m}^3$).

Existing Air Quality

In order to determine the air quality in the project area, ambient data from the closest representative monitoring stations must be used. The monitoring station located in Gallup, New Mexico, approximately 65 miles east of the project site, provided five years (1983 to 1987) of hourly meteorological surface data; concurrent twice daily mixing height data was obtained from Albuquerque, New Mexico. All meteorological data was provided by the National Climatic Data Center. Also, EPNG used Arizona Department of Environmental Quality's 1989 reported background NO₂ concentration of 5 μ g/m³ for rural areas as representative of Window Rock's air quality and modeled the cumulative impacts from existing emission units and the proposed emission unit. Since the existing emission units are pre-PSD emission units, they are considered part of the background NO₂ for the purposes of PSD.

As shown in Table IV, the modeled impacts from the entire source show NO $_{\rm X}$ (as NO $_{\rm 2}$) to be close to the National Ambient Air Quality Standard. Thus, El Paso Natural Gas provided six months of actual data to determine how the background concentration compares to the modeled information. Onsite monitoring data show that between June and October the NO $_{\rm 2}$ concentration was 30.1 μ g/m 3 and between October and January the mean NO $_{\rm 2}$ concetration was 26.6 μ g/m 3 . Thus, the background concentration at the site is lower than the modeled background concentration.

Air Quality Modeling

The applicant performed dispersion modeling using the EPA recommended Industrial Source Complex Short Term (ISCST) Model and the COMPLEX I Model to assess the impact of the proposed project on the applicable PSD Class I and Class II

increments and the NAAQS. The modeling results, using the emission rates and source parameters in Table III, indicate that ambient NO₂ impacts will be insignificant for impact area evaluation. Table IV presents the total air quality impact modeling results. Class I area impacts are not shown since they are negligible (less than 1 μ g/m³).

From the modeling results as a worst case scenario, the information indicates that the ambient air quality standard for NO_2 will not be exceeded. Furthermore, the onsite monitoring data shows that the background concentrations of NO_2 are actually lower than modeled. Hence, EPA does not expect any adverse impacts due to the proposed modification.

Stack Number ^a		Stack Gas Temperature Ex (^O F)	Stack Gas it Velocity (ft/s)	Stack Diameter (ft)	NO <u>2</u> Emission Rate
1	30	976	166	3.30	12.40 1.56
2	60	700	92	2.00	59.95 7.56
3	60	700	92	2.00	59.95 7.56
4	60	700	92	2.00	59.95 7.56
5	60	700	92	2.00	59.95 7.56
6	60	700	92	2.00	59.95 7.56
7	60	700	92	2.00	59.95 7.56
8	60	700	92	2.00	59.95 7.56
9	60	700	92	2.00	59.95 7.56
10	60	700	92	2.00	59.95 7.56
11	60	700	92	2.00	59.95 7.56
12	60	700	99	2.00	59.95 7.56
13	60	600	109	2.00	64.79 8.17
14	60	649	60	1.00	15.62 1.97
15	60	649	60	1.00	15.62 1.97
16	60	649	60	1.00	15.62 1.97
17	60	750	22	2.00	0.71 0.09
18	60	750	22	2.00	0.71 0.09

a 1:Solar Centaur H, 2-13:Existing Reciprocating Engines, 14-16:Auxiliary Engines 17-18:Steam Generators

b Taken from Table 5-9 of the EPNG PSD application at Navajo.

Table IV

Total Air Quality Impact Modeling Results of the Proposed Project on PSD Increments and NAAQS for $^{
m NO}_2^{
m C}$

Class II Increment (µg/m ³)	Increment Consumed (μg/m ³)	Total Facility Impact (μg/m ³)	Rural Background (µg/m ³)	Total Background (μg/m ³)	Total (μg/m ³)	NAAQS (µg/m ³)
25	3.2 ^a	92.4 ^e	5.0	89.2 ^f	97.4 ⁹	100 ^{b, c}

a Occurred 762 m southeast of the project site.

b Primary Standard (annual average).

^C Secondary Standard (annual average).

d Taken from Table 6-2 of the El Paso Natural Gas Company PSD application at Navajo.

e The total facility impact is the pre-PSD source modeled impacts plus the modification impacts.

f Total background concentration is rural background plus pre-PSD source modeled impcats.

g Total is the modification impact plus the rural background plus the pre-PSD source modeled impacts.

VIII. Additional Impacts Analysis

In addition to assessing the ambient air quality impact expected from a proposed new source or modification, the PSD regulations require that certain other impacts be considered. These additional impacts are those on visibility, soils, and vegetation.

A. <u>Visibility</u>

PSD regulations require that an analysis of the potential impairment to visibility in class I areas, airports, and integral vistas be performed.

Consultation with the Park Service has provided the following information: the nearest Class I area to the Navajo Compressor Station is the Petrified Forest National Park which is located approximately 26 miles (42.5 km) south of the project site; no integral vistas have been identified for the Petrified Forest National Park. Also, although no airports are in the vicinity, there a some landing strips whose visibility have a potential to be impacted.

A Level-1 screening analysis for visibility impairment was performed as set forth in the "Workbook for Plume Visual Impact Screening and Analysis" (EPA-450/4-88-015). According to the analysis procedures, the color perceptibility (or color difference), δE , and the contrast must be below the screening values of 2 and 0.05, respectively, when determining the maximum visual impacts inside the Class I area against the sky and against the terrain. perceptibility and the contrast must be determined with the sun in front of the viewer and behind the viewer, resulting in a total of four sets of values for screening within the Class I area. EPA used an ozone background concentration of 0.071 ppm (worst case concentration provided by the Park Service) when running the visibility screening model.

The estimated maximum impacts due to the Navajo Compressor Station modification on the Petrified Forest National Park were below the screening criteria. Therefore, no visibility impairments are expected in the Class I area. Similarly, no visibility impacts are expected on the airstrips; and, since no integral vistas were identified, no integral vistas will be impacted. The Petrified Forest superintendent did mention that the San Francisco Peaks, located approximately 170 km west of the Petrified Forest, are

informally used as integral vistas. Viscreen was run both with the source using the dry low NO_{X} combustors and without the dry low NO_{X} combustors. EPA does not believe that the modification will cause a perceptible change in visibility in the Class I area.

B. Soils and Vegetation

The PSD regulations require an analysis of the impact the emissions from a major source may have on soils and vegetation having significant commercial or recreational value. On the basis of the information provided by El Paso Natural Gas Company and the Park Service, the Navajo Compressor Station Modification will not significantly impact the soils and vegetation within the impact area. The compressor station willnot emit any heavy metals which would impact the food chain in the area; also, since no sensitive flora or fauna have been identified, and the estimated total maximum concentration of the pollutant under review will be well below the National Ambient Air Quality Standards (see Table IV), air emissions are not expected to impact the vegetation within the impact area.

IX. Endangered Species Act

Pursuamt to Section seven (7) of the Endangered Species Act, EPA is required to initiate consultation with the U.S. Fish and Wildlife Service (USFWS), if any action, including permit issuance, might jeopardize the continued existence of endangered or threatened species or adversely modify their critical habitat.

According to the 1987 USFWS publication of Endangered and Threatened Species of Arizona, two species are possible impacted candidates: the Black Footed Ferret, the Little The Bald Eagle, and the Peregrine Colorado Spinedace. Falcon were also identified by El Paso Natural Gas Company as sensitive species that may occasionaly pass through the impact area. The Bald Eagle and the Peregrine Falcon are migratory species which transit through the areas of the compressor stations. Although the habitat of the area can support both species, their appearance in the area is infrequent and short lived; therefore, it will be unlikely that either species will come in contact with emissions from the compressor station. The Black Footed Ferret has not been sited in Arizona since 1960, which means that this action will not threaten this species. The greatest impact on a sensitive species or its habitat is usually caused during the initial construction phase of the project (i.e. land clearing). However, since the additional power

generation unit will be located within the the existing unit, and since the secondary standards are not impacted, the endangered or threatened species will not be threatened or adversely action. Furthermore, consultation with the Wildlife Services indicates that no listed threatened or endangered species within the be affected by the proposed action.

X. Conclusion and Proposed Action

Based on the information supplied by El Paso Natural Gas Company and the analyses conducted by EPA, it is the preliminary determination of EPA that the proposed project will employ Best Available Control Technology and will not interfere with the attainment or maintenance of any applicable PSD increment or NAAQS in Apache County or in the Navajo Indian Reservation. Therefore, EPA intends to issue an approval to construct which will contain the following permit conditions.

Permit Conditions Window Rock Compressor Station

I. Permit Expiration

This Approval to Construct/Modify shall become invalid (1) if construction is not commenced (as defined in 40 CFR 52.21(b)(8)) within 18 months after the approval takes effect, (2) if construction is discontinued for a period of 18 months or more, or (3) if construction is not completed within a reasonable time.

II. Notification of Commencement of Construction and Startup

The Director of the Air and Toxics Division shall be notified in writing of the anticipated date of initial startup (as defined in 40 CFR 60.2(o)) of the Solar Centaur H gas turbine compressor not more than sixty (60) days nor less than thirty (30) days prior to such date and shall be notified in writing of the actual date of commencement of construction and startup within fifteen (15) days after such date.

III. Facilities Operation

All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this Approval to Construct/Modify shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions.

IV. Malfunction

The Director of the Air and Toxics Division shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in Section IX.D of these conditions. In addition, the Director of the Air and Toxics Division shall be notified in writing within fifteen (15) days of any such This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section IX.D of these conditions, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision

shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause.

V. Right to Entry

The Regional Administrator, the Navajo Nation Environmental Protection Administration, and/or their authorized representatives, upon the presentation of credentials, shall be permitted:

- A. to enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of this Approval to Construct/Modify; and
- B. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Approval to Construct/Modify; and
- c. to inspect any equipment, operation, or method required in this Approval to Construct/Modify; and
- D. to sample emissions from the source.

VI. Transfer of Ownership

In the event of any changes in control or ownership of facilities to be constructed or modified, this Approval to Construct/Modify shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of this Approval to Construct/Modify and its conditions by letter, a copy of which shall be forwarded to the Regional Administrator, the State and local Air Pollution Control Agency, and the Navajo Nation Environmental Protection Administration.

VII. <u>Severability</u>

The provisions of this Approval to Construct/Modify are severable, and, if any provision of this Approval to Construct/Modify is held invalid, the remainder of this Approval to Construct/Modify shall not be affected thereby.

VIII.Other Applicable Regulations

The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR parts 52, 60 and 61 and all other applicable federal, state and local air quality regulations.

IX. Special Conditions

A. Certification

El Paso Natural Gas Company (EPNG) shall notify EPA in writing of compliance with **Special Conditions IX.B and IX.E (CEMS)** and shall make such notification within fifteen (15) days of such compliance. This letter must be signed by a responsible representative of EPNG.

EPNG shall notify EPA in writing of the status and/or progress of the low NO_x combustor and shall make notification on a quarterly basis. This letter must be signed by a responsible representative of EPNG.

B. Air Pollution Control Equipment

No later than June of 1994, EPNG shall install, and continuously operate for control of NO $_{\rm X}$ emissions, a dry low NO $_{\rm X}$ combustor.

C. <u>Performance Tests</u>

- 1.a. Within 60 days after achieving the maximum operational rate of the proposed gas turbine compressor, but not later than 180 days after initial startup of the equipment as defined in 40 CFR 60.2(o), and at such other times as specified by EPA, EPNG shall conduct performance tests for NO_{x} and CO and furnish EPA a written report of the results of such tests. The tests for NO, and CO shall be conducted on an annual basis and at the maximum operating capacity of the facility being tested. Upon written request (Attn: A-3-3) from EPNG, EPA may approve the conducting of performance tests at a lower specified production rate. Also, after initial performance tests and upon written request from EPNG, EPA may approve the deletion of a specific annual test for the combustion units.
- 1.b. No later than 180 days after retrofit of the dry low NO_X combustor, and at such other times as specified by EPA, EPNG shall conduct performance tests for NO_X and CO and furnish EPA a written report of the results of such tests. The tests for NO_X and CO shall continue to be conducted on an annual basis and at the maximum operating capacity of the facility being tested as in 1.b. above. Upon written request (Attn: A-3-3) from EPNG, EPA may approve the conducting of performance tests at a lower specified production

rate. Also, after initial performance tests and upon written request from EPNG, EPA may approve the deletion of a specific annual test for the combustion units.

- 2. Performance tests for the emissions of NO_X and CO shall be conducted and the results reported in accordance with the test methods set forth in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used:
 - b. Performance tests for the emissions of NO_X shall be conducted using EPA Methods 1-4 and 7.
 - d. Performance tests for the emissions of CO shall be conducted using EPA Methods 1-4 and 10.

EPA (Attn: A-3-3) shall be notified in writing at least 30 days prior to such tests to allow time for the development of an approvable performance test plan and to arrange for an observer to be present at the test. Such prior approval will minimize the possibility of EPA rejection of test results for procedural deficiencies. In lieu of the above mentioned test methods, equivalent methods may be used with prior written approval from EPA.

3. For performance test purposes, sampling ports, platforms, and access shall be provided by EPNG on the combustion exhaust system in accordance with 40 CFR 60.8(e).

D. Emission Limits

NO_X On or after the date of startup of the gas turbine, EPNG shall not discharge or cause the discharge into the atmosphere NO_X (as NO₂) in excess of the more stringent of 12.40 lb/hr or 84.9 ppmvd at 15% O₂ (3-hour rolling average, at 6900 ft. from sea level) from the stack venting the combustion unit.

On or after the installation of the low $\rm NO_X$ combustor, but no later than December 1993, EPNG shall not discharge or cause the discharge into the atmosphere $\rm NO_X$ (as $\rm NO_2$) in excess of the more stringent of 6.1 lb/hr or 42 ppmvd of $\rm NO_X$ at 15% $\rm O_2$ (3-hour rolling average, at ISO conditions) from the stack venting the combustion unit.

On or after the date startup of the gas turbine, EPNG shall not discharge or cause the discharge into the atmosphere CO in excess of the more stringent of 0.78 lb/hr or 7 ppmvd at 15% O₂ (3-hour rolling average) from the stack venting combustion unit.

Opacity

On or after the date of startup, discharge or cause the discharge into the atmosphere any gases with an opacity in excess of 10% (six-minute rolling average) from the stack venting the combustion unit.

EPA may set a new lower maximum allowable emission rate for NO $_{\rm X}$ and CO after reviewing the performance test results and the first two quarters of the monitoring data required under Special ConditionsC and E before and after the installation of the low NO $_{\rm X}$ combustor.

If the emission limit for any of the above pollutants is revised, the difference between the pollutant emission limit set forth above and the lower pollutant emission limit shall not be allowed as an emission offset for future construction or modification.

E. Continuous Monitoring

1. NO_{X} and CO and opacity Continuous Monitoring;

Prior to the date of startup of the gas turbine and thereafter, EPNG shall install, maintain, and operate the following continuous monitoring systems in the stack venting the gas turbine.

- a. Continuous monitoring systems to measure stack gas NO_X, CO, O₂, and opacity. The systems shall meet EPA monitoring performance specification (40 CFR 60.13 and 40 CFR 60, Appendix B, Performance Specifications 1, 2, 3, and 4).
- b. A continuous monitoring system to measure stack gas volumetric flow rates. The system shall meet EPA monitoring performance specification (40 CFR Part 60, Appendix B, Performance Specification 6).
- c. Hourly records of fuel use and operation shall be kept for the emergency generator

- 2. EPNG shall notify EPA (Attn: A--3) of the date upon which demonstration of the continuous monitoring system performance commences (40 CFR 60.13(c)).
- 3. EPNG shall submit a written report of all excess emissions to EPA (Attn: A-3-3) for every calendar quarter. The report shall include the following:
 - a. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factors(s) used, and the date and time of commencement and completion of each time period of excess emissions.
 - b. Specific identification of each period of excess emissions that occur during start-ups, shutdowns, and malfunctions of any compressors. The nature and cause of any malfunction (if known) and the corrective action taken or preventative measures adopted shall also be reported.
 - c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
 - d. When no excess emissions have occurred or the continuous monitoring system has not been inoperative, repaired, or adjusted, such information shall be stated in the report.
 - e. Excess emissions shall be defined as the following:
 - (1) Any three-hour period during which the average emissions of NO_X and/or CO, as measured by the continuous monitoring system or by a performance test, exceed the maximum emission limits set forth for each of the pollutants in Condition IX.D above.
 - (2) Any six-minute period during which the average opacity as measured by the continuous monitoring system exceed the maximum emission limits set forth in Condition IX.D above.

- (3) Any period in excess of 100 hours on a twelve month rolling average during which the emergency generator is operated.
- f. Excess emissions indicated by the CEM system shall be considered violations of the applicable emission limits for the purposes of this permit.
- 6. Quality Assurance for CEMS

Not less than 90 days prior to the date of startup of the gas compressor, EPNG shall submit to the EPA (Attn: A-3-3) a quality assurance project plan for the certification and operation of the continuous emission monitors. Such a plan shall conform to the quality assurance procedures set forth in 40 CFR 60, Appendix F, "Quality Assurance Procedures." Continuous emission monitoring may not begin until the QA project plan has been approved by EPA Region 9.

7. EPNG shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least five years following the date of such measurements, maintenance, reports and records.

F. Fuel Use

EPNG shall not consume more than 38,736 scf/hr (at 59 degrees F) of natural gas in the gas turbine compressor.

EPNG shall install a metering device to continuously measure and record the amount of natural gas consumed by the gas turbine compressor.

Records of fuel use shall be maintained and kept on site for at least five years following the date of their making.

X. Agency Notifications

All correspondence as required by this Approval to Construct shall be forwarded to:

- A. Director, Air and Toxics Division (Attn: A-3-3) EPA Region IX 75 Hawthorne Street San Francisco, CA 94105
- B. Director, Environmental Protection Administration
 Navajo Nation
 Division of Resources
 P.O. Box 308
 Window Rock, AZ 86515
- C. Director, Office of Air Quality
 Arizona Department of Environmental Quality
 2005 Central Avenue
 Phoenix, AZ 85004